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Leaving no one behind: Evaluating access to water, sanitation and hygiene for vulnerable and marginalized groups



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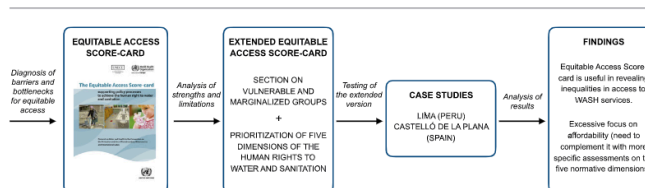
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HIGHLIGHTS

- Assessing WASH needs/barriers of the disadvantaged is key for leaving no one behind.
- More tools for diagnosing WASH access of vulnerable/marginalized groups are needed.
- The Equitable Access Score-card helps reveal inequalities in access to WASH.
- The score-card should be complemented with assessments on the five HRTWS dimensions.

GRAPHICAL ABSTRACT



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ABSTRACT

Achieving equitable access to water, sanitation and hygiene (WASH) services requires paying special attention to the most disadvantaged segments of the population. Yet, despite all the progress made to evaluate the access of vulnerable and marginalized groups, important knowledge gaps still remain with respect to identifying their specific barriers and needs. At the global level, for example, the two monitoring mechanisms for SDG 6 – the Joint Monitoring Programme (JMP) and Global Analysis and Assessment of Sanitation and drinking-water (GLAAS) – face difficulties in understanding how, and to what extent, vulnerable and marginalized groups access WASH services. In this context, this work examines the UNECE/WHO-Europe 'Equitable Access Score-card' for assessing the access to WASH services by vulnerable and marginalized groups. In particular, we: (i) analyse its strengths and limitations as a tool for revealing the needs of these groups in accessing WASH services; and (ii) propose an extended variant of the score-card that addresses these limitations. We test this version in two local-level case studies: Lima (Peru) and Castelló de la Plana (Spain). The score-card diagnosis is found to be particularly useful for collecting information on the level of access of the different vulnerable and marginalized groups, as well as the specific public policies and funding mechanisms in place that address and support their needs. However, the score-card should be complemented with specific assessments of all five normative dimensions of the human rights to water and sanitation (access, availability, quality, acceptability and affordability) in order to have a better understanding of the concerns for service delivery for the different vulnerable and marginalized groups.

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Leaving no one behind: Evaluating access to water, sanitation and hygiene for vulnerable and marginalized groups

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Abstract

Achieving equitable access to water, sanitation and hygiene (WASH) services requires paying special attention to the most disadvantaged segments of the population. Yet, despite all the progress made to evaluate the access of vulnerable and marginalized groups, important knowledge gaps still remain with respect to identifying their specific barriers and needs. At the global level, for example, the two monitoring mechanisms for SDG 6 – the Joint Monitoring Programme (JMP) and Global Analysis and Assessment of Sanitation and drinking-water (GLAAS) – face difficulties in understanding how, and to what extent, vulnerable and marginalized groups access WASH services. In this context, this work examines the UNECE/WHO-Europe ‘Equitable Access Score-card’ for assessing the access to WASH services by vulnerable and marginalized groups. In particular, we: (i) analyse its strengths and limitations as a tool for revealing the needs of these groups in accessing WASH services; and (ii) propose an extended variant of the score-card that addresses these limitations. We test this version in two local-level case studies: Lima (Peru) and Castelló de la Plana (Spain). The score-card diagnosis is found to be particularly useful for collecting information on the level of access of the different vulnerable and marginalized groups, as well as the specific public policies and funding mechanisms in place that address and support their needs. However, the score-card should be complemented with specific assessments of all five normative dimensions of the human rights to water and sanitation (access, availability, quality, acceptability and affordability) in order to have a better understanding of the concerns for service delivery for the different vulnerable and marginalized groups.

Keywords: Water Poverty; Security; Inequalities; Vulnerable Groups; Human Rights to Water and Sanitation; Sustainable Development Goals

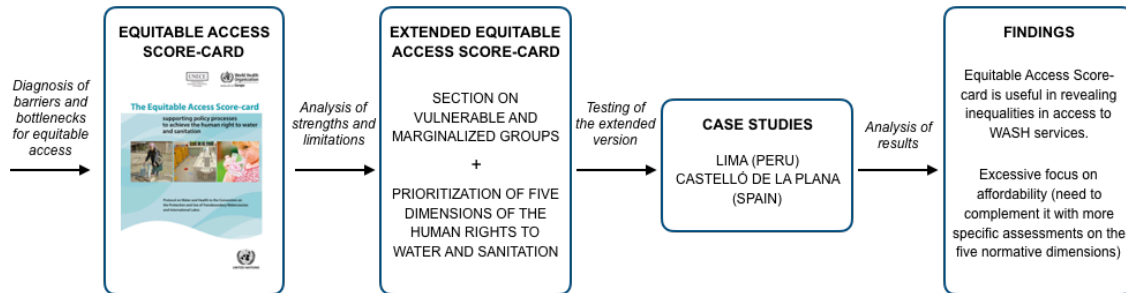
Abbreviations

GLAAS	Global Annual Assessment of Sanitation and Drinking-Water
HRtWS	Human Rights to Water and Sanitation
JMP	Joint Monitoring Programme
SDG	Sustainable Development Goal
UNECE	United Nations Economic Commission for Europe
UNGA	United Nations General Assembly
WASH	Water, Sanitation and Hygiene

Highlights

- Assessing WASH needs/barriers of the disadvantaged is key for leaving no one behind.
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- The Equitable Access Score-card helps reveal inequalities in access to WASH.
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Graphical abstract



1. INTRODUCTION

Access to water, sanitation and hygiene (WASH) has increased significantly in recent years, as recent official estimates show (JMP, 2017). However, progress has been uneven, and available data highlight inequalities among and within countries. Inequalities exist not only between rural and urban areas, poor and rich, but also between vulnerable groups and the general population. Addressing and eliminating these inequalities have become central concerns in the Sustainable Development Goals (SDGs) era, with a dedicated goal on “reducing inequality within and amongst countries” (SDG 10), as well as across most SDGs, including for example “ensuring availability and sustainable management of water and sanitation for all” (SDG 6). Furthermore, the issue of inequalities attracted the attention of the former Special Rapporteur, Catarina de Albuquerque, on the Human Rights to Water and Sanitation (HRtWS), who dedicated the 2012 report to provide guidance on the integration of non-discrimination and equality into the post-2015 development agenda for WASH (UNGA, 2012). In her report, the Special Rapporteur states that while inequalities manifest themselves in varied ways across and within countries, the patterns of marginalization and discrimination are consistent around the world. Therefore, it is necessary to draw attention to the needs of the most disadvantaged segments of the population in accessing these services, in order to target efforts towards them more efficiently.

At the international level, progress has been mainly focused on monitoring specific types of inequalities and measuring their progressive elimination (UN-Water, 2015; JMP, 2016). In particular, the Joint Monitoring Programme (JMP) – the official custodian agency for SDG 6 Targets 6.1 and 6.2 on access to WASH – collects disaggregated data to monitor disparities using three stratifiers: urban–rural, wealth and subnational regions (JMP, 2017). On the other hand, the Global Annual Assessment of Sanitation and Drinking-Water (GLAAS) – which is in charge of monitoring the means of implementation targets for SDG 6 – seeks to understand to what extent vulnerable groups are explicitly included in national WASH policies, plans and targets (UN-Water, 2017). These two monitoring initiatives are useful to show global trends and identify major gaps in access to WASH services. Ensuring that ‘no one is left behind’ requires, however, going beyond monitoring these global inequalities and detecting the different types of discrimination in access to WASH, with particular emphasis on the most disadvantaged groups of society (UN Special Rapporteur on the Human Right to Water and Sanitation, 2012). As Winkler and Satterthwaite (2017) explain, “non-discrimination and equality are perhaps the most essential norms in the human rights framework and underscore the need for monitoring inequalities”.

The academic literature also shows relevant efforts to propose and validate instruments and mechanisms for assessing inequalities in WASH access (Wang et al., 2012; Luh et al., 2013; Bain et al., 2014; Pullan et al., 2014; Yu et al., 2014; Flores-Baquero et al., 2017; Giné-Garriga & Pérez-Foguet, 2019; Ezbakhe & Pérez-Foguet, 2018), but they have not been implemented at scale and have only been tested in specific case studies. Hence, improved assessment tools are required to: (i) help reveal who remains invisible and excluded, (ii) address the root causes of their exclusion and discrimination, and (iii) develop prioritized plans to remove barriers and bottlenecks that constrain progress in

equitable access to WASH services, particularly by the most vulnerable and marginalized groups. ‘Leaving no one behind’ will only be achieved when the needs of the most vulnerable and marginalized populations are understood and addressed, and targeted actions are adopted to tackle the specific barriers faced by those deprived of access to water and sanitation.

The challenge lies in determining which vulnerable and marginalized groups should be evaluated, as these are context- and sector-specific. In Tanzania, for example, commonly targeted vulnerable groups in WASH interventions are children, women of reproductive age and people with disabilities (Lerisse et al., 2013), while social programmes from the European Union are mostly directed towards refugees, homeless people and Roma communities (Edgar, 2004). Several works have addressed the obstacles faced by different vulnerable and marginalized populations when accessing WASH services. Relevant examples include schools in disadvantaged regions of Nicaragua (Jordanova et al., 2015), ethnic minorities in Vietnam (Rheinländer et al., 2010), low-cost settlements in South Africa (Govender et al., 2010), rural communities in disadvantaged regions of Brazil (Aleixo et al., 2019), the homeless in India (Walters, 2014) and indigenous communities (Jiménez et al., 2014). The WASH Poverty Diagnostic Initiative has also reported on the additional burden placed on disadvantaged groups – mainly women, the indigenous and the disabled – from 18 different countries (The World Bank, 2017). Nonetheless, important knowledge gaps still remain with respect to the systematic assessment of their access to WASH. In addition, the diversity in the definition and characterization of vulnerable and marginalized groups makes it difficult to analyse the access challenges they face.

One initiative that has been increasingly adopted for analysing the WASH access needs and barriers of vulnerable and marginalized populations is the UNECE-WHO/Europe ‘Protocol on Water and Health’ (UNECE & WHO Regional Office for Europe, 1999). One area of work of the protocol is on “equitable access to water and sanitation”, which stipulates that "equitable access to water, adequate in terms both of quantity and of quality, should be provided for all members of the population, especially those who suffer a disadvantage or social exclusion", and provides guidance documents and tools to better understand, assess and address the challenges to ensure equitable access to these basic services (UNECE & WHO Regional Office for Europe, 2012; 2013; 2016). Specifically, it develops the “Equitable Access Score-card”, an analytic tool to support a multi-stakeholder dialogue aimed at: (i) establishing a baseline measure of the equity of access; (ii) agreeing on what actions should be taken in removing inequalities; and (iii) evaluating progress. The score-card structures the evaluation of WASH access through an exhaustive list of population groups who live in vulnerable situations or are discriminated against, such as people who have special physical needs, rely on public facilities, use institutional facilities or live in unsanitary housing (UNECE & WHO Regional Office for Europe, 2013). This tool has already been applied at different scales: the national level (e.g., in Portugal, Ukraine and Armenia); the regional or district level (e.g., in three districts of the former Yugoslav Republic of Macedonia and in two regions in Serbia); and the local level (e.g., in Paris) (UNECE, 2019). Through a self-assessment process, the tool has allowed a shared diagnosis among sector stakeholders of the barriers and bottlenecks for equitable access and has provided useful guidance for the elaboration of action plans.

Against this background, the aim of this article is twofold: (i) examine the strengths and limitations of the Equitable Access Score-card as a tool for revealing the needs of vulnerable and marginalised groups in accessing WASH services, and (ii) propose and test an extended variant of the score-card that addresses these limitations. Two metropolitan cities, Lima (Peru) and Castelló de la Plana (Spain), have been selected as initial case studies to pilot the extended version of the tool. The rest of the paper is structured as follows (Figure 1). In Section 2, we analyse the Equitable Access Score-card, discussing its main strengths and limitations, and proposing an extension of the score-card. We then present the main characteristics of the two pilot case studies in Section 3. In Section 4, we present the main findings of applying the extended score-card to the case studies. Finally, in Section 5 we summarize the key conclusions.

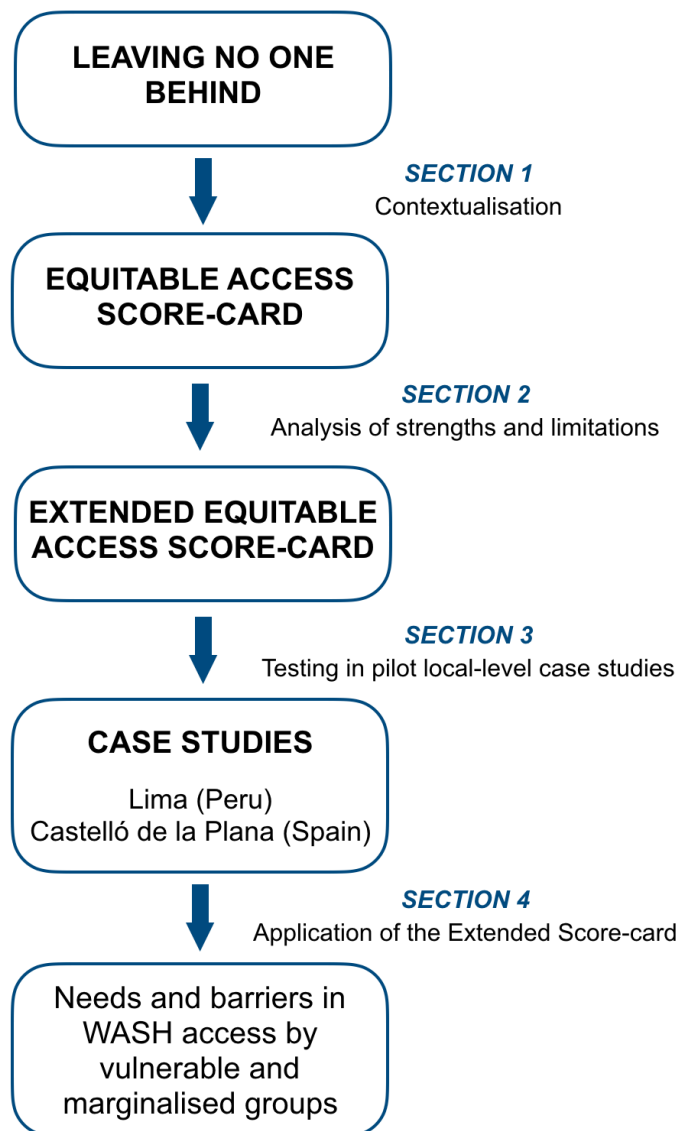


Figure 1. Structure of the article.

2. ANALYSIS OF THE EQUITABLE ACCESS SCORE-CARD

The Equitable Access Score-card was developed by UNECE and the WHO Regional Office for Europe to support policy processes for realizing the HRtWS, and to address the specific barriers faced by vulnerable and marginalized groups in accessing water and sanitation (UNECE & WHO Regional Office for Europe, 2013). It is intended as a self-evaluation instrument, a multi-stakeholder dialogue, a rational evidence-based approach for diagnosing the equity gaps and translating the priorities identified through the self-assessment into actions. The score-card is structured in four thematic sections: (i) governance frameworks, tackling their ‘equity blindness’; (ii) geographical disparities, addressing the access gaps between urban and rural areas; (iii) vulnerable and marginalized groups, focusing on the specific problems these disadvantaged populations face in securing water and sanitation services; and (iv) affordability, reviewing the tariff and social protection measures in place. Our analysis focuses on its third section – i.e., on which problems vulnerable and marginalized groups face in securing water and sanitation services.

One of the main contributions of the score-card is that it identifies an exhaustive list of vulnerable and marginalized groups (Table 1), which are intended to serve as the starting point for the assessment, with the possibility to adapt them to a given context. Vulnerable groups are defined here as those deserving special attention due to their physical or developmental limitations (e.g., people with disabilities or children) or who depend on others (e.g., users of health care facilities or prisoners), while marginalized groups include those who require particular focus due to their cultural discrimination (e.g., nomadic communities and the homeless). It is relevant to highlight that these 10 categories do not refer to self-vulnerability but rather contexts of vulnerability or marginalization. Indeed, we can all be in situations that render us vulnerable (e.g. as users of institutional facilities or in our workplaces). Therefore, these categories must be seen as dynamic and evolving, with characteristics that define situations in which we can all experience at a certain point of our lives.

Table 1. Vulnerable and marginalized groups included in the Equitable Access Score-card.

GROUP	RATIONALE
Persons with special physical needs	Disabled, sick and elderly people may face problems in accessing water and sanitation services due to their specific physical needs
Users of health facilities	Users of health facilities may have difficulties securing independent access to water and sanitation and rely on the services provided by these facilities
Users of educational facilities	Users of educational facilities (such as schools and kindergartens) may have difficulties securing independent access to water and sanitation for a large part of the day and rely on the services provided by these facilities
Users of retirement homes	Users of retirement homes may have difficulties securing independent access to water and sanitation and rely on the services provided by these
Prisoners	Prisoners may have difficulties securing independent access to water and sanitation and rely on the services provided at prisons and other detention centres

Refugees	Refugees living in refugee camps and centres may have difficulties securing independent access to water and sanitation and must rely on the services provided at these facilities
Homeless people	Homeless people have no fixed dwelling to be connected to the water and sanitation networks and rely on public facilities
Travelers and nomadic communities	Travelers and nomadic communities have no fixed dwelling to be connected to the water and sanitation networks and rely on public facilities
People living in housing without water and sanitation	People living in situations of illegal tenure or as squatters, or with low-quality rented accommodations, have problems accessing basic water and sanitation services
Persons without access to water and sanitation in their workplaces	There may be cases of workplaces without adequate access to water and sanitation

Another important contribution of the score-card is that it helps quantify the access to water and sanitation by vulnerable and marginalized groups. Access to reliable data (both quantitative and qualitative) about the vulnerable and marginalized is key to contextualize their levels of access to water and sanitation. However, data on access to WASH services by the most disadvantaged are mostly missing from official statistics, even when they represent a relatively large proportion of the population (UN-Water, 2015). To address this data gap, the score-card calls for collecting general data about access to water and sanitation, in particular by the poorest fifth of the population and by users of institutional facilities.

Furthermore, the score-card also enables the analysis of the different public policies in the WASH sector as well as other sectors, addressing the needs of vulnerable and marginalized groups. These public policies play a fundamental role in tackling access inequalities. Human rights-based policies on water and sanitation help address the specific needs of the most vulnerable and marginalized groups, which otherwise are often hidden within global indicators (Amjad et al., 2014). Nevertheless, although most countries have recognized the HRtWS and have developed specific measures for reaching vulnerable populations in their WASH policies and plans, they often lack financial procedures to target resources to these populations (UN-Water, 2017): the latest GLAAS report shows that less than 30% of the 74 responding countries planned and targeted budget allocations towards equitable access to water and sanitation. GLAAS, however, gathers data from representatives of the governmental bodies responsible for service delivery. A participatory, multi-stakeholder approach, as adopted by the score-card, can be very insightful and provide more updated, reliable and local data. The score-card uses consensus among participants to analyse the ‘equity perspective’ in public policies by examining whether there are: (i) policies in the water and sanitation sector recognizing the special and differentiated needs of vulnerable and marginalized groups; (ii) policies in other sectors ensuring access to water and sanitation by these groups; (iii) mechanisms to identify and address their water and sanitation needs; (iv) public budgets providing specific funding to address these needs; and (v) integrated approaches supporting the delivery of water and sanitation services for these populations.

Finally, the score-card allows for a specific analysis of the needs and barriers of each identified vulnerable and marginalized group. This is important, as the access challenges

faced by vulnerable and marginalized populations are diverse. These populations may not be able to access water and sanitation facilities because these are not adapted to their physical or cultural needs. They may also depend on services in institutions (e.g., hospitals, schools, prisons and refugee camps) that do not have adequate facilities, or even be intentionally discriminated against in terms of service provision. All of these different challenges must be recognized and addressed to guarantee an equitable access to water and sanitation. Yet, the majority of countries mainly target the poorest in their policies and plans, with less emphasis on other vulnerable groups, such as people living in informal settlements, refugees or ethnic minorities (UN-Water, 2017). The score-card provides a way of examining the barriers and needs of each vulnerable and marginalized group, in terms of: (i) specific data about their levels of access to safe drinking water and sanitation; (ii) public policies ensuring their access; (iii) public funding to support it; and (iv) complaint mechanisms in place (for users of institutional facilities).

However, one major limitation of the Equitable Access Score-card relates to how “access” to water and sanitation services is defined. The HRtWS are specifically approached through five normative dimensions: (i) availability, i.e., a sufficient supply of water and number of sanitation facilities must be available; (ii) physical accessibility, i.e. water and sanitation services must be accessible to everyone on a continuous basis; (iii) quality and safety, i.e. water must be safe for consumption and other uses, and sanitation facilities must be safe to use; (iv) affordability, i.e., access to water and sanitation must not undermine the ability to pay for other essential necessities; and (v) acceptability, i.e., water and sanitation facilities must be culturally acceptable (UNGA, 2011). By contrast, the score-card specifically addresses affordability, encompassing the other four dimensions under the broader definition of ‘access to water and sanitation’. As the former Special Rapporteur highlights, the concept of inclusiveness – inherent to SDG 6 – requires covering and implementing of all five dimensions (UNGA, 2011). Thus, a more distinct contemplation of the five dimensions may be necessary to better understand the needs of vulnerable and marginalized groups.

In this study, we propose an extended version of the Equitable Access Score-card. In particular, we add one subsection to analyse the relative importance of all five normative components of the HRtWS. In this subsection, all participants are requested to rank the five dimensions based on their relative importance (1 = least important, 5 = most important). Average scores (1–5) are then obtained to illustrate the prioritization of the five dimensions of the HRtWS.

3. PILOT LOCAL-LEVEL CASE STUDIES

Two municipalities have been selected to test the proposed extension of the Equitable Access Score-card: Lima (Peru) and Castelló de la Plana (Spain). These case studies were chosen to compare the level of service provided to vulnerable populations in two different socio-economic realities that share geographical and environmental conditions (Table 2). As seen, while both Lima and Castelló are metropolitan coastal areas under semi-arid climate conditions, their socio-economic conditions are notably different. Lima's population is nearly 30 times the population in Castelló, and its density 3.6 times greater. Furthermore, although the rent per capita in Lima is about 3.5 times lower than in Castelló, the expenditure on water bills is higher in Lima. For instance, considering the share of the annual water bill in the annual per capita income, we find a ratio 2.6 larger in the Peruvian city. This difference in the cost of the water bill could be even bigger in peri-urban areas of Lima, where the prices of the informal water market are generally higher. The coverage of water and sanitation services also varies: in Lima, the proportion of the population with access to improved water and sanitation services is 15 and 29 percentage points lower, respectively (data from Table 2). These communalities and differences of the case studies were the reason why they were selected for the application of the extended Equitable Access Score-card.

Table 2. Main geographical, climate and sector characteristics in the case studies (sources: JMP, 2015; FACSA, 2016; SEDAPAL, 2018)

	Lima (Peru)	Castelló de la Plana (Spain)
Location	Pacific coast	Mediterranean coast
Population (*1,000 inhabitants) in 2017	9,500	316
Area (km ²)	2,819	340
Density (inhabitants/km ²) in 2017	3,370	929
Temperature (°C) (lowest and highest daily mean)	16 – 23	11 – 26
Precipitation (mm per year) (lowest and highest average)	10 – 60	9 – 71
Rent per capita (USD per year)	8,024	27,800
Water consumption (litres per person per day) (mean value)	15.2 – 447 (average of 230)	180
Water tariff for domestic uses (USD per m ³) (mean value)	0.86	1.52
Water coverage (% population)	83	98
Sanitation coverage (% population)	68	97
Service providers	Servicio de Agua Potable y Alcantarillado de Lima (SEDAPAL) ¹ + Informal market	Sociedad de Fomento Agrícola Castellonense SA (FACSA)

¹ SEDAPAL is the service provider in 46 of the 49 districts of the Lima metropolitan area (http://www.sedapal.com.pe/c/document_library/get_file?uuid=9fc90709-f8bb-43c7-98ec-046d1e6cd3cd)

In terms of methodology, the implementation of the extended Equitable Access Score-

card encompassed the next steps: (i) identification of the stakeholders to be included in the assessment; (ii) planification of the series of working sessions (e.g., expert workshops, interviews and focus groups) to discuss and complete the score-card with the stakeholders; and (iii) analysis of the data gathered and discussion of the results with the different actors. The selection of the stakeholders was guided by the aim of involving a wide range of stakeholders, from four distinctive groups: (i) public authorities responsible for water and sanitation services delivery; (ii) civil society organizations working with vulnerable groups; (iii) service providers; and (iv) independent water professionals and/or researchers. The full list of stakeholders included in the case studies is detailed in Table 3. It could be expected that either the number or the typology of the stakeholders involved might influence achieved results. Nonetheless, this was not considered a major limitation of the study as its purpose was to assess whether the proposed extension overcame the limitations of the Equitable Access Score-card. Therefore, more important than obtaining accurate and representative responses was the validation of the process of integrating the five dimensions of the HRtWS in the evaluation of the needs and barriers of vulnerable and marginalized groups.

During the multi-stakeholder working sessions, the discussions took place as follows: (i) presentation of the extended Equitable Access Score-card; (ii) common understanding amongst the participants on the concept, scope and approach of all sections and questions included in the score-card; and (iii) discussion, dialogue and consensus-building to answer all questions included in the tool – based on the knowledge and expertise of the participants and including (where available) complementary information sources (e.g., the water tariff scheme was presented by the supplier to guide the discussion on affordability issues). The full information on the assessment process followed in the case studies are provided by Pérez-Foguet et al. (2016) and Grau-Huguet (2016).

Table 3. Stakeholders involved in each case study.

Stakeholders	Lima	Castelló de la Plana
Public authorities	<ul style="list-style-type: none"> - Manager of the National Urban Sanitation Plan (from the Ministry of Housing, Construction and Sanitation). - Policy Manager of the National Superintendence of Sanitation Services. - Monitoring Specialist of the Technical Body of the Management of Sanitation Services. - Specialist in International Cooperation (from the Ministry of Women and Vulnerable Populations). - Member of the National Water Authority. - Environmental Specialist (from the Ministry of Health). - Mayor of Comas municipality. 	<ul style="list-style-type: none"> - Councillor of Participation, Equality and Housing (from the City Council).
Civil society organizations	<ul style="list-style-type: none"> - Coordinator of projects from NGO “Fomento de la Vida” - Vicepresident of the “Movimiento Peruanos sin Agua”. 	<ul style="list-style-type: none"> - 3 workers of the NGO “Cáritas Interparroquial”. - 3 workers of the NGO “Creu Roja” (Red Cross). - 2 workers of the NGO Medicus Mundi.

Service providers	<ul style="list-style-type: none"> - Project Manager of SEDAPAL. - Social Management Team of Sedapal 	- Representative of the water utility FACSA.
Water professionals	- Researcher in Law (from the Pontificia Universidad Católica de Perú)	<ul style="list-style-type: none"> - 2 researchers in civil and environmental engineering (from the Universitat Politecnica de Catalunya). - 3 researchers in psycho-social, economic and technical architecture (Universitat Jaume I of Castelló).
Vulnerable populations	- 93 school children and young adults from Collique peri-urban area.	No direct representation (indirectly represented through CSOs).

4. APPLICATION OF THE EXTENDED EQUITABLE ACCESS SCORE-CARD

This section presents the results from applying the extended version of the Equitable Access Score-card in Lima and Castelló. First, the outcomes of the standard score-card are presented and discussed (i.e., access data, public policies on the needs of vulnerable and marginalized groups, and analysis of each group). Second, the results of the added subsection on the five normative dimensions of the HRtWS are examined.

4.1. Access data

While in Lima no quantitative information was collected, in Castelló the score-card constituted a good tool to gather data on the access of the most vulnerable segments of the population (Figure 2). Access to adequate drinking water and sanitation was estimated to exceed 80% in all households except the poorest wealth quintile, which lagged behind at 35% (for drinking water) and 26% (for sanitation). These figures, which were estimated by the stakeholders involved, are strikingly low for a municipality in Spain, where the average access rates (according to JMP estimates) are 98% for drinking water and 97% for sanitation. In addition, the significant access gap puts a spotlight on the need for targeting the poorest households in future public policies. With respect to access beyond the household, it was perceived that public institutions such as hospitals, schools and prisons provided adequate water and sanitation services. However, there was no specific data on access for the homeless population. The reasons for this lack of data could be both practical, due to the difficulties of survey sampling, and political: as the homeless generally constitute a small proportion of the total population, they are likely to be ignored in political agendas. Quantitative information, or the lack thereof, becomes key to understanding and addressing access barriers within a municipality covered with services. Indeed, a recent work by Ruá et al. (2019) identified 17 vulnerable neighborhoods that threatened urban cohesion in Castelló due to their unimproved dwellings and thus needed to be prioritized in future policies.

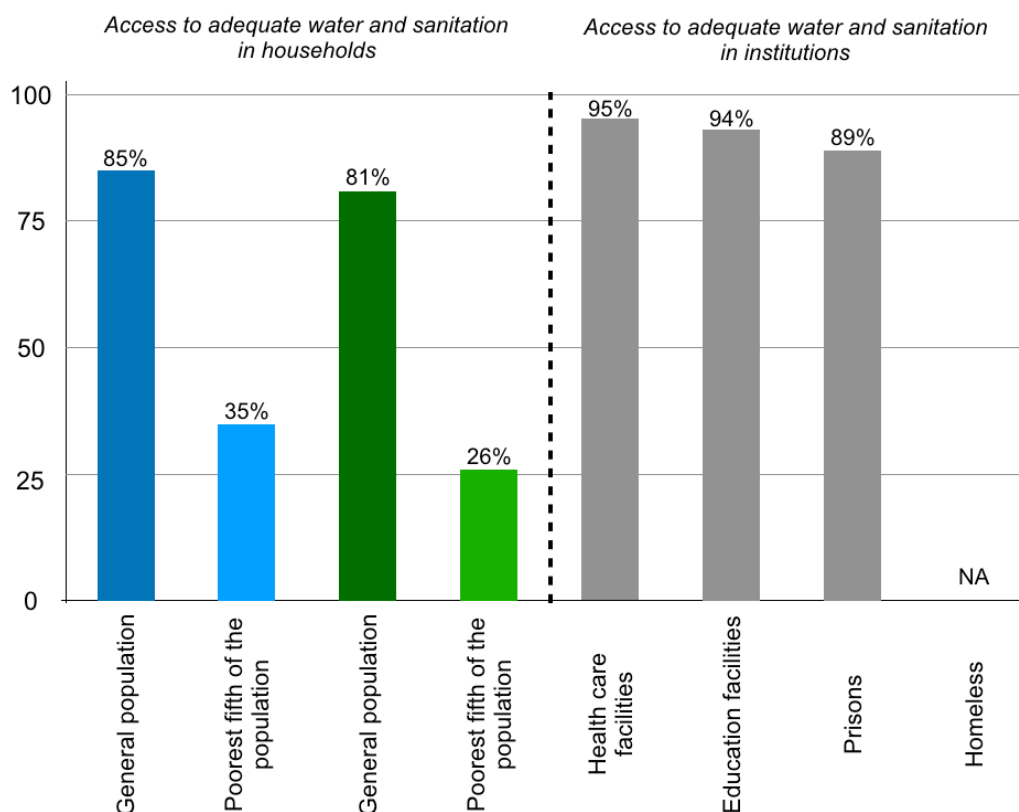


Figure 2. Quantitative information, based on the stakeholders' estimations, on access of vulnerable and marginalized groups to water (in blue) and sanitation (in green) services in Castelló de la Plana (Spain), based on the estimations of the 15 stakeholders involved.

4.2. Public policies addressing the needs of vulnerable and marginalized groups

The score-card also helped to reveal the absence of equity measures in public policies and plans at the local level (Figure 3). Both diagnoses in Castelló and Lima showed the low extent to which existing policies and budgets for water and sanitation took the 'equitable perspective' into account. Public policies of other sectors (e.g., social inclusion, housing and health) were found to incorporate more equity measures for water and sanitation access than the WASH sector itself. In addition, public policies lacked mechanisms to identify and address the needs of vulnerable and marginalized groups. The presence of specific funding to target these populations in public budgets was also considered to be scarce, despite new agreements between the service provider and the municipality to assume the water bills of vulnerable households. Furthermore, a comparison of the results in both case studies shows that, overall, in Castelló public policies took more into account the WASH needs of vulnerable and marginalized groups. This divergence in the equity measures was foreseeable due to the different socio-economic characteristics, as highlighted in Section 3.

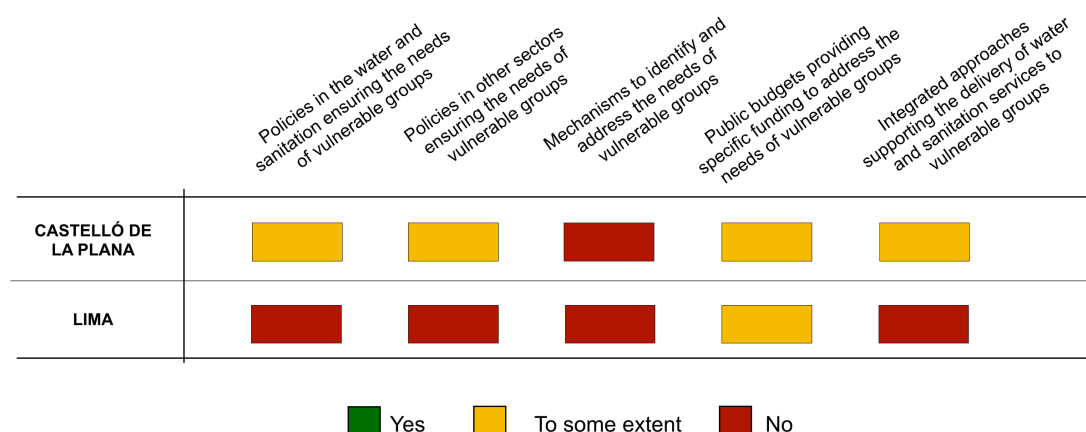


Figure 3. Analysis of the ‘equity perspective’ of public policies in Castelló de la Plana (Spain) and Lima (Peru), based on the estimations of the stakeholders involved (15 in Castelló and 12 in Lima).

4.3. Analysis of the access to water and sanitation services for each vulnerable and marginalized group

Results from both Castelló and Lima diagnoses demonstrate the need to analyse the access of each vulnerable and marginalized group distinctively, as they differ from a policy-making perspective (Figure 4). In Castelló, there was a widespread lack of specific data on the access of these vulnerable segments of the population, public policies and specific funding for people outside institutional facilities. More data on the level of access were believed to be available in Lima, but references to the most vulnerable groups were considered to be missing from policy and budgeting formulation. On a positive note, both assessments revealed the existence of appropriate complaint mechanisms in public institutions. As acknowledged by the Special Rapporteur, Leo Heller, on the HRtWS (UNGA, 2018) in his latest report, complaint mechanisms are widely used as a tool to increase accountability. Indeed, effective complaint mechanisms are key for the HRtWS, and help ensure adequate water and sanitation in institutional facilities. In addition, as in the case of the analysis of the equity perspective of public policies (Figure 3), there were significant differences between the two case studies in the access to water and sanitation by disadvantaged populations. On the whole, the equity picture was notably better in Castelló, as there were more public policies and funding measures for most vulnerable and marginalized groups (with the exception of the homeless).

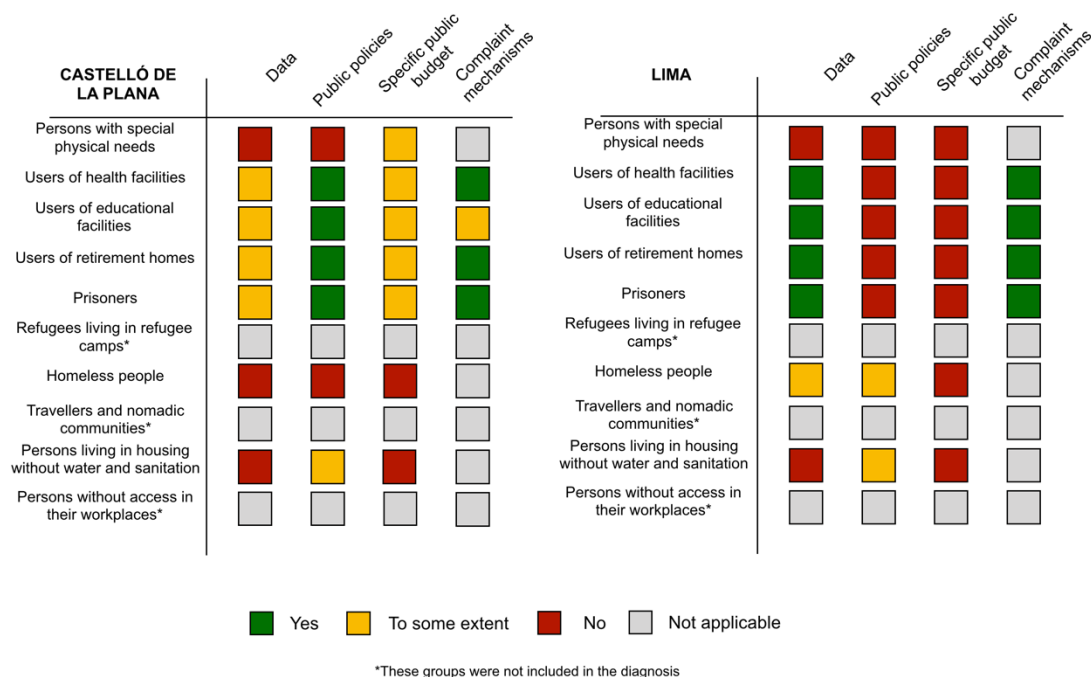


Figure 4. Analysis of the access to water and sanitation by the different vulnerable and marginalized groups in Castelló de la Plana (Spain) and Lima (Peru), based on the estimations of the stakeholders involved (15 in Castelló and 12 in Lima).

4.4. Prioritization of dimensions of the HRtWS for vulnerable and marginalized groups

This added subsection of the score-card revealed the importance of analysing each of the five dimensions of the HRtWS distinctly. In Castelló, the prioritization of the five dimensions for the different vulnerable and marginalized groups revealed the concerns for service delivery to each group (Figure 5). The numbers represent the mean value of the relative importance (1 to 5) given by participants to the normative components of the HRtWS for each vulnerable group. For water supply, availability was considered the priority for homeless and people belonging to nomadic or travelling communities (rated 5 of 5). This is because public fountains on which they rely were mostly unavailable or inoperative. For people with disabilities, physical accessibility was the main concern (4.8/5), as many standard water facilities were inadequate to their special physical needs. Quality, on the other hand, gained more importance in institutional settings (from 3.8 to 4.5 of 5), most likely due to the excessive hardness of water supplied. For households without access to water, which often were disconnected after unpaid water bills, the priority issues were a mixture of availability and affordability (4.4/5 and 3.6/5, respectively). Results from prioritization of sanitation were similar but more polarized: availability and physical accessibility were the two top priorities for all groups except households without access, for which affordability remained the primary issue.

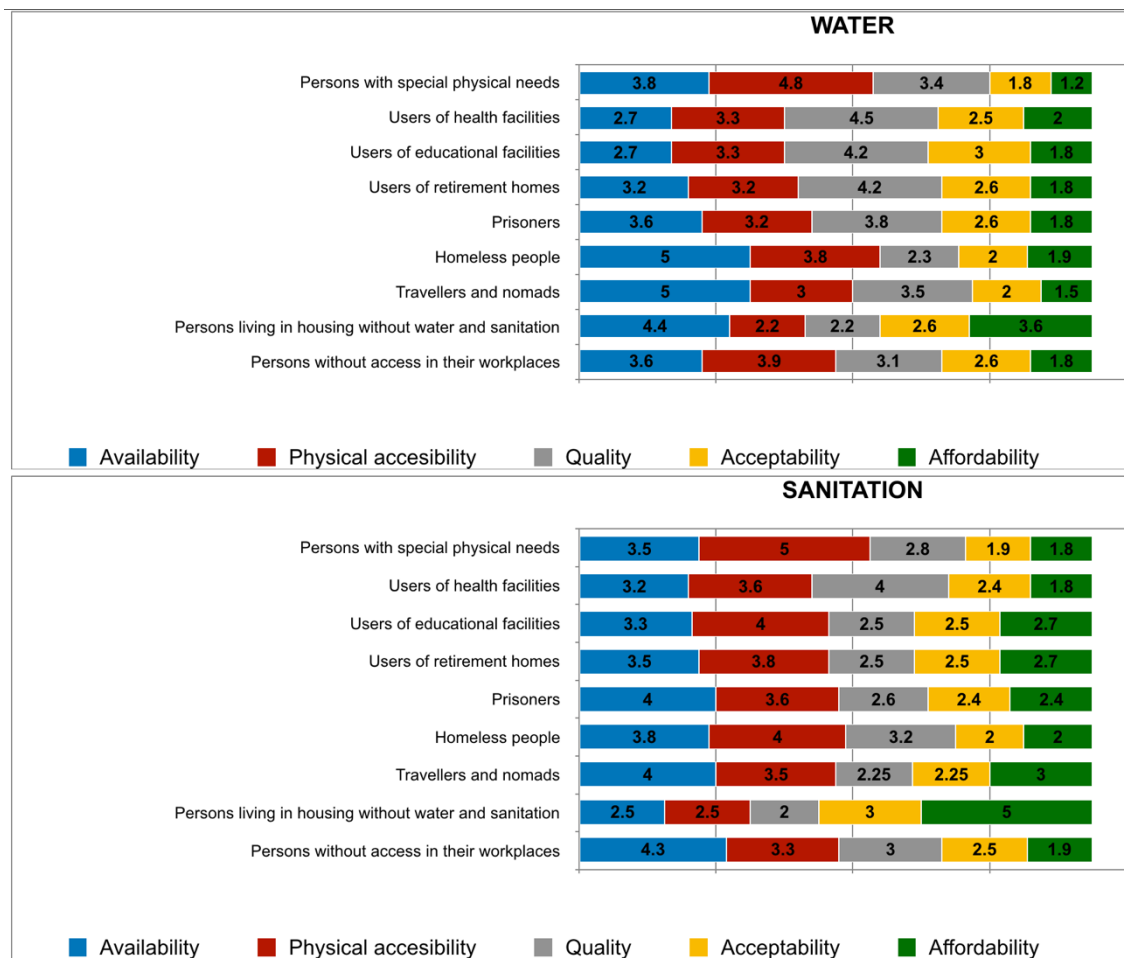


Figure 5. Prioritization of the dimensions of the HRtWS for the different vulnerable and marginalized groups in Castelló (Spain), based on the estimations of the 15 stakeholders involved.

In Lima, the qualitative analysis on the perception of 93 school children and young adults in Collique provided the prioritization of the dimensions of the HRtWS (Figure 6). This vulnerable group valued quality as the most critical issue for water supply (3.7 out of 5), followed closely by physical accessibility (3.6/5). This was partly explained by the poor condition of the water distribution network, laden by the problems of interrupted service and poor water quality. Since quality and physical accessibility were issues the inhabitants of Collique faced on a daily basis, school users considered it a priority. For sanitation, quality was again the top concern (3.7/5). The second priority was acceptability (3.1/5): factors such as cleanliness, privacy, crowding and maintenance standards were highly valued by this segment of the population. Interestingly, prioritization of the dimensions of the human right to water in Lima is similar to that for users of educational facilities in Castelló. In contrast, for sanitation, quality and acceptability were given a higher importance in Lima than in Castelló.

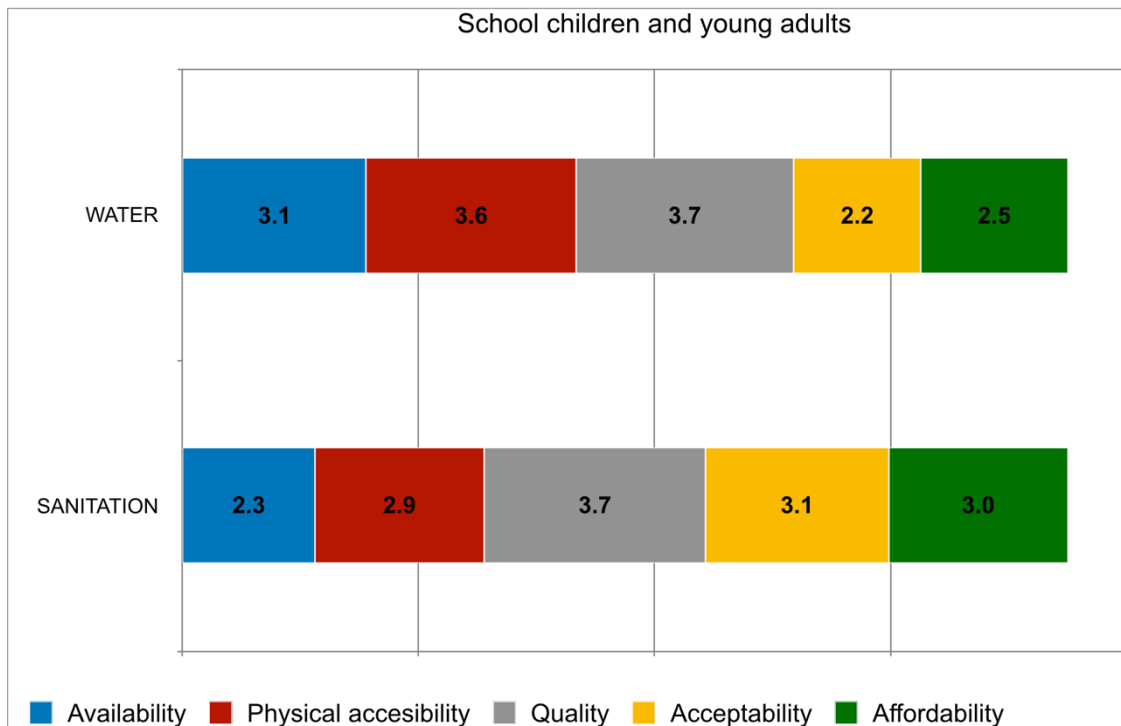


Figure 6. Prioritization of the dimensions of the HRtWS for school children and young adults in Lima's (Peru) peri-urban area, based on the perceptions of the 93 school children and young adults involved.

This shows the protocol's limitation of focusing on the economic dimension of the HRtWS. Although affordability is a growing concern for lower-income households, it might not be for other vulnerable and marginalized groups. Indeed, the case studies in Castelló and Lima revealed that affordability was not the priority issue for any group except for households without access, and that quality aspects were the most relevant when people depended on third parties (i.e., public institutions, workplace, etc.), in particular for water supply.

5. CONCLUSIONS

In this study, we explore two connected questions: (i) what are the strengths and limitations of the Protocol's Equitable Access Score-card in revealing the inequalities in access to WASH services? and (ii) how can the score-card be improved to address these limitations? As such, we analyse the score-card, and propose and test a variant in two local-level contexts, Lima (Peru) and Castelló de la Plana (Spain), of different socio-economic realities but shared geographical and environmental conditions.

The two main findings are as follows:

- The Protocol's Equitable Access Score-card constitutes a good instrument for understanding not only the needs of each vulnerable and marginalized group but also the barriers they face in accessing WASH services. The participatory, multi-stakeholder approach of the score-card is found to be particularly valuable for collecting reliable and detailed information on levels of access, the public policies and the in-place funding for ensuring equitable access.
- The score-card focuses too much on the affordability dimension. It would be beneficial to complement the score-card with more specific assessments on the five normative dimensions of the HRtWS. An extension of the score-card, as the one proposed in this article, is needed to understand the concerns for service delivery for the different vulnerable and marginalized groups. Indeed, in the diagnoses of Lima and Castelló, quality is found to be one of the most important dimensions and hence more policy attention would be required.

Next steps in the long march towards an equitable access to water and sanitation include the development – and dissemination¹ – of analytical tools that help operationalise the HRtWS. In this sense, the Equitable Access Scorecard and adaptations of this tool – as the one presented in this study – contribute to measuring and monitoring the access to water and sanitation by the most disadvantaged segments of the population, as a first step towards reducing existing inequalities.

¹ Dissemination is currently being undertaken within the “Water and Poverty Network” (WAPONET) (funded by the “Ministerio de Economía, Industria y Competitividad”, Redes de Excelencia: CSO2017-90702-REDT)

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